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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/750,170

12/31/2003

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884.B79US1

5034

21186 7590 07/14/2010
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EXAMINER

TOWFIGHI, AFSHAWN M

ART UNIT

PAPER NUMBER

2458

NOTIFICATION DATE

DELIVERY MODE

07/14/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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DETAILED ACTION

1. Claims 1-7, 9, 11-14, 21-28, 30-36, 38, 40-43 & 50-54 are pending.

Response to Arguments

2. Applicant's arguments filed with respect to claims 1-7, 9, 11-14, 21-28, 30-36, 38, 40-43 & 50-54 have been fully considered but they are not persuasive.

The applicant argues that the combination of Kepler and Achtermann does not teach a plurality of techniques for optimization, and that the combination does not teach “the determining includes using the optimization technique associated with an optimization identifier”.

The examiner respectfully disagrees. Achtermann teaches that a distribution manager creates a transaction for routing using a route with the best optimization available to it (Col 5 Lines 28-40). A unique ID is associated with the optimized transaction (the unique ID represents the optimization path transaction. There exists a multiplicity of optimization paths for the manager to determine to route the request (the multiplicity of optimization paths is the plurality of techniques for optimization). The selecting of an optimized path uses the plurality of paths; and the optimization path has a unique ID associated with it. Therefore, the combination of Kepler and Achtermann does teach the argued limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 5, 11, 30, 31, 34 & 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,103,589 issued to Kepler, et al. (Kepler), in view of U.S. Patent No. 6,615,274 issued to Achtermann, et al. (Achtermann).

4. Regarding claim 1, Kepler teaches a method comprising: receiving a first request to perform a write operation on one of a plurality of multi-master data stores, wherein the one of the plurality of data stores is undetermined (See column 3, lines 32-34, and col. 15, lines 64-65; wherein the request can be a write; and col. 15, lines 22-29; wherein the data stores are multi-mastered because entries in one database, can be updated via input in another database), and wherein the first request includes an identifier of a plurality of possible identifiers each associated with a respective technique of a plurality of possible techniques (See col. 6, lines 21-24 & 30-34, and col. 14, lines 16-18; wherein each field, including the "route by" field, includes an identifier, and wherein each field, including the "city" field, has a plurality of possible identifiers); the plurality of techniques including closest to principal or object, closest to dynamic object X, closest to caller, and closest to Directory Services Markup Language (DSML) server or client techniques (See col. 9, lines 52-57; wherein the user is the caller and/or principal); creating a second request, wherein the second request requests performance

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of the write operation (See col. 3, lines 34-36 and Fig 5 steps 74-82; wherein the modified search request is the second request, and the modified request is to determine how the original request will perform across the multiple data stores (i.e. which data stores will be the correct store, so that the first request can then be sent to it); determining the one of the plurality of multi-master data stores to which the second request will be transmitted (See col. 3, lines 36-37; wherein the examination of the search-routing database determines “the one”); and transmitting the second request to the one of the plurality of multi-master data stores (See col. 3, lines 40-42; wherein the request is sent to the database identified in the search-routing database). Kepler does not disclose that the identifier is an optimization technique identifier associated with one of a plurality of optimization techniques, nor that the determining includes using the optimization technique associated with an optimization technique identifier. However, Achtermann teaches one of a plurality of optimization techniques and that the step of determining includes using the optimization technique (See col. 5, lines 28-44; wherein the unique ID, is the optimization technique identifier; and the route generated from the unique ID, is using the optimization technique identifier in the step of determining).

Using the features of Achtermann in the system of Kepler would have expanded the capabilities of Kepler to included distributed databases, and would have made the system more cost effective and efficient by allowing the system to use the most efficient paths to desired databases. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Achtermann with Kepler.

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5. Regarding claim 2, Kepler in view of Achtermann teach the invention as described in claim 1. Kepler further teaches the plurality of data stores are directory servers (See col. 5, lines 4-6, and col. 7, lines 3-6).

6. Regarding claim 5, Kepler in view of Achtermann teach the invention as described in claim 1. Kepler further teaches the first request includes additional optimization technique identifiers (See col. 3, line 66 to col. 4, line 3; wherein the update action field contains the additional optimization technique).

7. Regarding claim 11, Kepler teaches a method comprising: creating a first transaction request, wherein the first transaction request includes an identifier for determining to which one of a plurality of multi-master servers a second transaction request is transmitted (See col. 3, lines 32-34, and col. 14, lines 16-18; wherein the route-by field is the identifier; and col. 15, lines 22-29; wherein the data stores are multi-mastered because entries in one database, can be updated via input in another database), the identifier being associated with a respective technique of a plurality of possible techniques (See col. 6, lines 21-24 & 30-34; wherein each field, including the "route-by" field, includes an identifier, each identifier can be a technique, and there are a plurality of possible identifiers/techniques); the plurality of techniques including closest to principal or object, closest to dynamic object X, closest to caller, and closest to Directory Services Markup Language (DSML) server or client techniques (See col. 9, lines 52-57; wherein the user is the caller and/or principal); and transmitting the first transaction request to an intermediate server (See col. 3, lines 34-37; wherein the search-routing database is the intermediate server). Kepler does not teach optimization

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technique identifiers. However, Achtermann teaches optimization technique identifiers (See col. 5, lines 28-44; wherein the unique ID is the optimization technique identifier, and wherein there are a plurality of identifiers). Using the features of Achtermann in the system of Kepler would have expanded the capabilities of Kepler to include distributed databases, and would have made the system more cost effective by allowing the system to use the most efficient paths to desired databases. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Achtermann with Kepler.

8. Regarding claim 30, this claim recites a machine-readable medium with instructions for carrying out the method of claim 1, and is rejected for the same reasons.

9. Regarding claim 31, this claim recites a machine-readable medium with instructions for carrying out the method of claim 2, and is rejected for the same reasons.

10. Regarding claim 34, this claim recites a machine-readable medium with instructions for carrying out the method of claim 5, and is rejected for the same reasons.

11. Regarding claim 40, this claim recites a machine-readable medium with instructions for carrying out the method of claim 11, and is rejected for the same reasons.

12. Claims 3, 6, 9, 12, 13, 26, 32, 35, 38, 41 & 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kepler, in view of Achtermann, as applied to claims 1, 11, 30 & 40 above, and further in view of U.S. Patent Application Publication No. 2004/0083479 to Bondarenko, et al. (Bondarenko).

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13. Regarding claim 3, Kepler in view of Achtermann teach the invention as described in claim 1. Kepler and Achtermann do not teach the first request includes code of the Directory Services Markup Language (DSML). However, Bondarenko teaches the use of Directory Services Markup Language (DSML) (See paragraph 87, lines 8-13). Using the features of Bondarenko in the system of Kepler in view of Achtermann would have allowed the system to take advantage of the capabilities offered by DSML, including expressing directory queries, updates and results in an XML application. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Bondarenko with Achtermann and Kepler.

14. Regarding claim 6, Kepler teaches a method comprising: receiving in a directory server a request to modify a directory, wherein the request is received from a server (See col. 3, lines 32-36), and wherein the server selected the directory server based on a technique associated with a technique identifier included in a request (See col. 14, lines 16-18; wherein the route-by field is the technique identifier), the technique identifier being one of a plurality of possible technique identifiers each associated with a respective technique of a plurality of possible techniques (See col. 6, lines 21-24 & 30-34, and col. 14, lines 16-18; wherein each field, including the "route by" field, includes an identifier, and wherein each field, including the "city" field, has a plurality of possible identifiers); modifying the directory (See col. 15, lines 61-64; wherein delete/insert is the modification); and transmitting a response to the server, wherein the response indicates success or failure of the modification (See col. 3, lines 38-40; wherein the responsive

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data indicates success or failure). Further, regarding claim 6, Achtermann teaches an optimization technique that is used to select a server (See col. 5, lines 28-44; wherein the unique ID that is used to determine the shortest path, is the optimization technique). Kepler, in view of Achtermann, do not teach the server is a Directory Services Markup Language (DSML) server. However, Bondarenko teaches the use of a DSML server (See par. 87, lines 8-13). Using the features of Bondarenko in the system of Kepler in view of Achtermann would have allowed the system to take advantage of the capabilities offered by DSML, including expressing directory queries, updates and results in an XML application. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Bondarenko with Achtermann and Kepler.

15. Regarding claim 9, Kepler in view of Achtermann and Bondarenko teach the invention as described in claim 6. Bondarenko further teaches the request is formatted according to the Directory Services Markup Language (See col. 87, lines 8-13).

16. Regarding claim 12, Kepler, in view of Achtermann, teach the invention as described in claim 11. Kepler and Achtermann do not teach the first transaction request includes Directory Services Markup Language code. However, Bondarenko teaches the first transaction request includes Directory Services Markup Language code (See par. 87, lines 8-13). Using the features of Bondarenko in the system of Kepler in view of Achtermann would have allowed the system to take advantage of the capabilities offered by DSML, including expressing directory queries, updates and results in an XML application. Therefore, it would have been obvious to one of ordinary skill in the art, at

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the time of the invention, to combine the teachings of Bondarenko with Achtermann and Kepler.

17. Regarding claim 13, Kepler, in view of Achtermann, teach the invention as described in claim 11. Kepler and Achtermann do not teach the first transaction request includes a Simple Object Access Protocol (SOAP) comment, wherein the SOAP comment includes the optimization technique identifier. However, Bondarenko teaches the first transaction request includes a Simple Object Access Protocol (SOAP) comment, and wherein the SOAP comment includes the optimization technique identifier (See par. 56, lines 1-6, and par. 57, lines 1-7; wherein the entire request is transported using SOAP). Using the features of Bondarenko in the system of Kepler in view of Achtermann would have allowed the system to take advantage of the capabilities offered by SOAP, including transporting requests in a standard and accepted web-based protocol. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Bondarenko with Achtermann and Kepler.

18. Regarding claim 26, Kepler teaches a system comprising: a processor (40); a dynamic random access memory unit (42); a machine readable medium including instructions for performing the following operations, receiving in a directory server a request to modify a directory, wherein the request is received from a server (See col. 2, lines 32-36), and wherein the server selected the directory server based on a technique associated with a technique identifier included in a request (See col. 14, lines 16-18), the technique identifier being one of a plurality of possible technique identifiers

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each associated with a respective technique of a plurality of possible techniques (See col. 6, lines 21-24 & 30-34, and col. 14, lines 16-18; wherein each field, including the “route by” field, includes an identifier, and wherein each field, including the “city” field, has a plurality of possible identifiers); modifying the directory (See col. 15, lines 61-64); and transmitting a response to the server, wherein the response indicates success of failure of the modification (See col. 3, lines 38-40). Further, regarding claim 26, Achtermann teaches an optimization technique that is used to select a server (See col. 5, lines 28-4). Kepler and Achtermann do not teach the server is a Directory Services Markup Language (DSML) server. However, Bondarenko teaches the use of a Directory Services Markup Language (DSML) server (See par. 87, lines 8-13). Using the features of Bondarenko in the system of Kepler in view of Achtermann would have allowed the system to take advantage of the capabilities offered by DSML, including expressing directory queries, updates and results in an XML application. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Bondarenko with Achtermann and Kepler.

19. Regarding claim 32, this claim recites a machine-readable medium with instructions for carrying out the method of claim 3, and is rejected for the same reasons.

20. Regarding claim 35, this claim recites a machine-readable medium with instructions for carrying out the method of claim 6, and is rejected for the same reasons.

21. Regarding claim 38, this claim recites a machine-readable medium with instructions for carrying out the method of claim 9, and is rejected for the same reasons.

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22. Regarding claim 41, this claim recites a machine-readable medium with instructions for carrying out the method of claim 12, and is rejected for the same reasons.

23. Regarding claim 42, this claim recites a machine-readable medium with instructions for carrying out the method of claim 13, and is rejected for the same reasons.

24. Claims 4, 14, 33 & 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kepler, in view of Achtermann, as applied to claims 1, 11, 30 & 40 above, and further in view of U.S. Patent No. 7,376,827 issued to Jiao.

25. Regarding claim 4, Kepler, in view of Achtermann, teach the invention as described in claim 1. Kepler and Achtermann do not teach the second request is formatted according to the Lightweight Directory Access Protocol (LDAP). However, Jiao teaches formatting requests according to the Lightweight Directory Access Protocol (See col. 6, lines 41-43). Using the features of Jiao in the system of Kepler, in view of Achtermann, would have allowed the system to take advantage of mechanisms offered by LDAP, including the ability to determine the structure of information in a directory, and the ability to receive paged information delivery. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Jiao with the system of Kepler and Achtermann.

26. Regarding claim 14, Kepler, in view of Achtermann, teach the invention as described in claim 11. Kepler and Achtermann do not teach the second transaction

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request is formatted according to the Lightweight Directory Access Protocol (LDAP).

However, Jiao teaches formatting requests according to the Lightweight Directory Access Protocol (See col. 6, lines 41-43). Using the features of Jiao in the system of Kepler, in view of Achtermann, would have allowed the system to take advantage of mechanisms offered by LDAP, including the ability to determine the structure of information in a directory, and the ability to receive paged information delivery.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Jiao with the system of Kepler and Achtermann.

27. Regarding claim 33, this claim recites a machine-readable medium with instructions for carrying out the method of claim 4, and is rejected for the same reasons.

28. Regarding claim 43, this claim recites a machine-readable medium with instructions for carrying out the method of claim 14, and is rejected for the same reasons.

29. Claims 7, 21-24, 27, 28, 36 & 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kepler, in view of Achtermann and Bondarenko, and further in view of Jiao.

30. Regarding claim 7, Kepler, in view of Achtermann and Bondarenko, teach the invention as described in claim 6. Kepler, in view of Achtermann and Bondarenko, do not teach the request is formatted according to the Lightweight Directory Access Protocol (LDAP). However, Jiao teaches formatting requests according to the

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Lightweight Directory Access Protocol (See col. 6, lines 41-43). Using the features of Jiao in the system of Kepler, in view of Achtermann and Bondarenko, would have allowed the system to take advantage of mechanisms offered by LDAP, including the ability to determine the structure of information in a directory, and the ability to receive paged information delivery. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Jiao with the system of Kepler and Achtermann.

31. Regarding claim 21, Kepler teaches a method comprising: receiving a request, wherein the request includes, a technique identifier, the technique identifier being one of a plurality of possible technique identifiers each associated with a respective technique of a plurality of possible techniques (See col. 3, lines 32-34, col. 6, lines 21-24 & 30-34, and col. 14, lines 16-18; wherein each field, including the “route by” field, includes an identifier, and wherein each field, including the “city” field, has a plurality of possible identifiers); and a first set of one or more directory server write requests (See col. 15, lines 64-65); creating a second set of one or more requests, wherein each of the requests includes at least one of the directory server write requests (See col. 3, lines 34-36); determining to which of a third set of geographically distributed directory servers the requests will be transmitted, wherein the determining includes using a technique associated with the technique identifier (See col. 3, lines 36-37, and col. 14, lines 16-18), and wherein the technique selects those of the third set of servers based on a network location of one or more principals and one or more objects (See col. 9, lines 52-59); and transmitting ones of the second set of requests to ones of the third set of

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servers (See col. 3, lines 40-42). Kepler does not teach that the request is a DSML request, a plurality of optimization techniques, the one or more requests are LDAP requests. However: Achtermann teaches a plurality of optimization techniques that are used to select a server (See col. 5, lines 28-44; wherein the unique ID determines the optimized path), and the use of multi-master servers (See col. 1, lines 45-48); Bondarenko teaches the use of DSML servers (See par. 87, lines 8-13); and, Jiao teaches the use of one or more LDAP requests (See col. 6, lines 41-43). Using the features of Achtermann in the system of Kepler would have expanded the capabilities of Kepler to included distributed databases, and would have made the system more cost effective by allowing the system to use the most efficient path to desired databases. Using the features of Bondarenko in the system of Kepler would have allowed the system to take advantage of the capabilities offered by DSML, including expressing directory queries, updates and results in an XML application. Using the features of Jiao in the system of Kepler would have allowed the system to take advantage of mechanisms offered by LDAP, including the ability to determine the structure of information in a directory, and the ability to receive paged information delivery. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Achtermann, Bondarenko and Jiao in the system of Kepler.

32. Regarding claim 22, Kepler, in view of Achtermann, Bondarenko and Jiao, teach the invention as described in claim 21. Kepler further teaches the use of a secondary

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optimization technique (See col. 3, line 66 to col. 4, line 3; wherein the update action field, is the secondary technique).

33. Regarding claim 23, Kepler, in view of Achtermann, Bondarenko and Jiao, teach the invention as described in claim 21. Bondarenko further teaches the optimization technique identifier is located in a SOAP comment (See par. 56, lines 1-6, and par. 57, lines 1-7; wherein the entire request is transported using SOAP).

34. Regarding claim 24, Kepler, in view of Achtermann, Bondarenko and Jiao, teach the invention as described in claim 21. Jiao further teaches the network location of the one or more principals and the one or more objects is determined using one or more of a set of network location services (See col. 8, lines 7-9; wherein Domain Name System (DNS) is the location service).

35. Regarding claim 27, Kepler, in view of Achtermann and Bondarenko, teach the invention as described in claim 26. Kepler, in view of Achtermann and Bondarenko, do not teach the request is formatted according to the Lightweight Directory Access Protocol (LDAP). However, Jiao teaches formatting requests according to the Lightweight Directory Access Protocol (See col. 6, lines 41-43). Using the features of Jiao in the system of Kepler, Achtermann and Bondarenko would have allowed the system to take advantage of mechanisms offered by LDAP, including the ability to determine the structure of information in a directory, and the ability to receive paged information delivery. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Jiao in the system of Kepler, Achtermann and Bondarenko.

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36. Regarding claim 28, Kepler, in view of Achtermann and Bondarenko, teach the invention as described in claim 26. Kepler, in view of Achtermann and Bondarenko, do not teach the second request is formatted according to the Lightweight Directory Access Protocol (LDAP). However, Jiao teaches formatting requests according to the Lightweight Directory Access Protocol (See col. 6, lines 41-43). Using the features of Jiao in the system of Kepler, Achtermann and Bondarenko would have allowed the system to take advantage of mechanisms offered by LDAP, including the ability to determine the structure of information in a directory, and the ability to receive paged information delivery. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Jiao in the system of Kepler, Achtermann and Bondarenko.

37. Regarding claim 36, this claim recites a machine-readable medium with instructions for carrying out the method of claim 7, and is rejected for the same reasons.

38. Regarding claim 50, this claim recites a machine-readable medium with instructions for carrying out the method of claim 21, and is rejected for the same reasons.

39. Regarding claim 51, this claim recites a machine-readable medium with instructions for carrying out the method of claim 22, and is rejected for the same reasons.

40. Regarding claim 52, this claim recites a machine-readable medium with instructions for carrying out the method of claim 23, and is rejected for the same reasons.

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41. Regarding claim 53, this claim recites a machine-readable medium with instructions for carrying out the method of claim 24, and is rejected for the same reasons.

42. Claims 25 & 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kepler, in view of Achtermann, Bondarenko and Jiao, as applied to claims 21 & 50 above, and further in view of U.S. Patent Application Publication No. 2003/0120502 to Robb, et al. (Robb), and U.S. Patent No. 6,006,331 to Chu, et al. (Chu).

43. Regarding claim 25, Kepler, in view of Achtermann, Bondarenko and Jiao, teach the invention as described in claim 21. Kepler, in view of Achtermann, Bondarenko and Jiao, do not teach the set of network location services include Session Initiation Protocol (SIP), and Internet Locator Service (ILS). However, Robb teaches the Session Initiation Protocol as a network location service (See par. 3, line 68), and Chu teaches the Internet Locator Service (ILS) as a network location service (See col. 5, lines 34-35). Using the features of Robb and Chu in the system of Kepler, in view of Achtermann, Bondarenko and Jiao, would have expanded the locating capabilities of the system, thereby allowing faster location of servers, computers and users, and possibly locating more servers, computers and users than otherwise possible. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Robb and Chu in the system of Kepler, in view of Achtermann, Bondarenko and Jiao.

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44. Regarding claim 54, this claim recites a machine-readable medium with instructions for carrying out the method of claim 25, and is rejected for the same reasons.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AFSHAWN TOWFIGHI whose telephone number is (571)270-7296. The examiner can normally be reached on Monday - Friday 8:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph E. Avellino can be reached on (571)272-3905. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. T./

Examiner, Art Unit 2458

/Joseph E. Avellino/

Supervisory Patent Examiner, Art Unit 2458